EDITORIAL NOTES.

Thanks to the Secretaries of Veterinary Medical Societies and to a large number of practitioners we can claim that the Record has been a useful journal —in future it will also be ornamental. Our new heading is a work of Art, and this paragraph is written to give the credit to whom it is due. Years ago, when Prof. Gamgee was head of The New Veterinary College, Edinburgh, there was attached to the Institution a Students' Debating Society, which gave a certificate of honour to those members who read and defended a thesis on some Scientific or Professional subject. This certificate was ornamented with a design by Mr. Clark Stanton, an artist well-known as the author of the Elcho Challenge Shield. Mr. Bower, M.R.C.V.S., of East Rudham, is one of the few holders of the Certificate, and from him we obtained it and have produced the slightly modified copy which appears on our title page. Keats said "A thing of beauty is a joy for ever." Our front page then will always please, but our inner pages are, after all, far and away the most important, and we would just remind our contributors that on them we rely for making those pages useful and pleasant.

The Annual General Meeting will be held on Monday next, at Red Lion Square. The adoption of the Council's report will, we fear, be a rather perfunctory ceremony, as the paper contains a rather meagre programme a little ingenuity will be required to bring forward a discussion on any of the great professional questions now being agitated unless some latitude be allowed by the President. Strictly speaking the meeting is solely for the adoption of the report, and any subject not referred to in its pages may be ruled out of order. It is, however, generally recognised that the only meeting in the year of the whole profession should not be too strictly bound in red-tape. Were it not so, the simplest and best report of the Council would be that which contained least. Of course it is open to any member to discuss nearly any subject by a formal amendment to the report, This is a cumbersome proceeding, and the amendment is always lost by the feeling that if it were carried a fresh report would have to be printed, and another meeting of the Body Corporate be necessitated to adopt it. At times, although it be certain that any amendment will be lost, it is worth going through the form to attain a discussion and gather the feeling of the members present.

Carlisle's Chloroform Muzzle seems likely to revolutionise veterinary operative surgery. It may be safely said that until recently the average practitioner seldom used anæsthetics, and consequently very few delicate operations were undertaken. Now all this is altered, and chloroform is widely used. The ability to control all movement of our patients renders ordinary operations very much simpler, and encourages a resort to surgical aid in many cases which formerly would have been considered beyond our reach. This new departure will extend, and as our patients are less likely than the human subject to suffer from shock, and are very much more free from all the operative sequelæ which are attempted to be guarded against by somewhat fanciful antiseptic methods, we may hope to widely extend our surgical art. We may even look forward with confidence to the time when we shall be able to partially repay the human surgeon for all he has taugth us, by contributing something to universal surgical knowledge.

Next to the discovery of a safe anæsthetic may be placed the invention of a method of using it at once easy, safe, and practical. This Mr. Carlisle has afforded us, and he deserves well of the profession. His invention is not merely the saddler's appliance by which chloroform is now given with impunity—it is far more—It is the entrance to a new field of veterinary operative surgery; it is the beneficent remover of pain from thousands of suffering animals, and we hope it will be the direct cause of a marked professional advantage. *Palmam qui meruit ferat.*

It is seldom we hear of Professor Simonds now. He passes a quiet pastoral existence in the Isle of Wight, but is still Consulting Veterinary Surgeon to the R.A.S. of England. At the last meeting of this Body he put in an unaccustomed appearance, and in answer to a question, quietly confessed he was not sufficiently well acquainted with the regulations to say whether Cattle diseases in Germany were strictly looked after. Surely his position ought to be an honorary one. The Professor told his audience that in 1857 he had investigated the possible passage of Cattle Plague from Eastern Europe to our shores and "had found that such was the cattle traffic between one country and another that it was perfectly impossible to prevent a contagious disease from crossing a boundary which simply consisted of a line drawn across the frontier." We have no recollection of this in his report—on the contrary, his opinion was that we need fear no invasion of Cattle-plague here on account of the strict measures adopted by the Western Powers for its prevention. As a matter of fact Holland has been free from foot-and-mouth disease for years, although Germany has been pretty constantly infected. The Dutch have demonstrated their ability to do what Professor Simonds asserts is "perfectly impossible."

We draw attention to an article on Inoculation for Pleuro-pneumonia, and also to a note from an agricultural paper adversely criticising the Compulsory Slaughter of Healthy Cattle on an infected place. Both subjects are of great importance, and the opinions of those possessing practical knowledge of them would be interesting and valuable.

ARTICLES AND CASES.

OXIDE OF SILICON VIEWED CLINICALLY.

By J. Sutcliffe Hurndall, Blackheath.

I do not propose to touch upon all the therapeutic effects in which Silica or the Oxide of Silicon, as it is chemically known, plays an important part, but to confine myself to one pathological condition in which I have frequently found it useful, viz., *suppuration*. In the veterinary practitioner's experience, obstinate and persistent suppuration is not unfrequently a fruitful source of annoyance, and especially so when the process is developed among delicate organs that preclude one from relying upon sharp, though very effective methods of surgery; in such cases I have been often glad to fall back upon a dynamically acting agent.

At first thought, anyone may be pardoned for forming a hasty conclusion that Silica is an inert substance; and in its crude state it unquestionably is so: I shall, however, briefly explain hereafter the process to which it has to be submitted to bring out its latent curative virtues.

It is by no means a new remedy, for I am indebted to Dr. Hughes for the information that as a medicine it was first used by Paracelsus and highly praised by him and his followers for various diseases. The systems affected by this agent are the cellular, mucous, lymphatic, and osseous, and it "influences the nutrition rather than the functional activity of the tissues." The first case to which I shall refer is that of a Skye Terrier Bitch, the subject of a perinœal fistula of some two months standing; the external opening of the fistula was situated midway between the anus and the vulva, and after tracing it carefully with the probe I found it extended gradually upwards for about an inch and a half or two inches with an orifice into the rectum. During the course of my examination I extracted from the owner—an invalided lady of good social position—that she was accustomed to take a little hot brandy and water for supper, and that it had been her practice to soak a biscuit therein and allow the dog to participate with her: for a considerable period, the dog's fœces had been very hard, and great difficulty was experienced in evacuation.

To this practice, I attributed the costive condition of the fœces, which I concluded had probably given rise to hœmorrhoids, and ultimately developed the fistula from which a constant and offensive discharge of pus took place. I requested that the brandy and water should be discontinued, and ordered a suitable dietary; giving instructions for frequent bathing with warm water in order that the long hair of the adjacent parts might be kept clean. I then sent one dozen powders to be given dry on the tongue, viz., one morning, noon and night: this of course lasted four days, and at the expiration of that time I made a second visit: I was gratified to learn and discover for myself that there was distinct evidence that the suppurative process was being arrested, and that reparative action had commenced. This treatment was continued for ten days, by which time a permanent cure was effected.

The second case is one of Caries in the Teeth and Ulcerated Gums in a Scotch Terrier; several teeth were implicated in both the upper and lower jaws, as also were all the gums. Although the dog had only been brought into the room about three minutes before I entered to examine it, so offensive was the smell that pervaded the atmosphere that for the moment it was almost unbearable: I was asked by the owner whether I did not think it better to extract the affected teeth: I explained that I should prefer trying the effect of internal remedies for a short time, and if no benefit was derived I would then resort to the operation. I prescribed Silica and provided twenty-four powders, with the request that these should be given and the dog be brought to me again in ten days: this was done, and marked improvement was then observable—the ulcerative process was completely arrested, the gums were undergoing healthy repair and the offensive odour from the carious teeth was barely perceptible at close quarters: this treatment was continued for another fortnight by which time a perfect cure was completed; and the dog though under observation for fully four years thereafter, had no return of this painful and unwholesome pathological development.

The third case is found in my own person as an instance of the influence of Silica over Carbuncles; on three occasions I have been the subject of very large carbuncles. As is well known, it is a very rare thing in ordinary practice for carbuncles to be treated without the use of the scalpel, and as its use is frequently resorted to before the malignant boil is mature, the results are disastrous at the time, and the treatment very protracted.

My last experience will serve to illustrate the treatment I underwent; on the other two occasions it was almost identical. I commenced early to foment with very hot water, and applied linseed-meal poultices, frequently changing the latter; as the suppuration proceeded but slowly, and the inflammation and constitutional fever were severe, I called in my medical man, who at once prescribed Silica. The carbuncle was situated on the posterior part of the neck and measured about four inches across: in colour it was very dark red: hard as a board, and extremely tender to the touch: after taking Silica for four days, during which time the poultices were religiously applied, the skin softened at several points and discharge commenced; after a day or two with the aid of a little forcible pressure a large quantity of yellowish mattery fluid was evacuated, and with it large pieces of necrosed cellular tissue sloughed off: the orifices widened and coalesced, after which new granulations appeared and by a slow healing process the lost substance was ultimately restored. This very satisfactory result was no doubt facilitated by Silica, as one of its recognised characteristics is to clear wounds of decayed masses and promote healthy granulation.

Without quoting any more special cases, I may conclude by stating that in a large number of instances I have found this remedy remarkably efficient and helpful in protracted cases of Strangles

in the horse—where the suppurative process could not be arrested: I do not, however, wish to be understood as suggesting this remedy in all cases of strangles, but only in those where suppuration is continued and obstinate.

Oxide of Silicon is rendered capable of assimilation in its passage through the digestive tract by means of repeated trituration with sugar of milk in recognised decimal or centesimal proportions: the most useful strength or attenuation is the sixth decimal for general purposes: five grains for a dog, ten grains for a horse, and twenty grains for a cow, to a dose.

INOCULATION FOR PLEURO.

Edinboro', 12 Bread Street.
April 29th, 1889.

To the Editor of The Veterinary Record.

DEAR SIR,

I send you copy of a letter published in last week's *North British Agriculturist*, in the hope that you may find a corner for it in *The Record*, and that the perusal of it may afford some pleasure to those of your readers who have given the subject any thought. Those not interested or who think the subject stale can skip it. As one who has for years entertained the very highest opinion of the value of inoculation as a measure in dealing with Bovine Pleuro-pneumonia, an opinion abundantly strengthened by the results of my work during the outbreak which (thanks to the model county, Cumberland) we have recently been subjected to; I am delighted to learn that our Colonial friends are investigating the matter on the lines which Mr. Gordon's letter indicates. To my mind the action of our Authorities contrasts poorly with that of the Queensland Government, and puts me in recollection of passing through a place with a friend where the grass was growing up between the stones of the streets, when my friend remarked—"Ah, this is a finished town evidently." Well, it is refreshing to know the grass is not growing over this subject in Australia. Yours faithfully,

R. RUTHERFORD, F.R.C.V.S.

SIR,—I have for years read with interest the contributions of Mr. Rutherford, veterinary surgeon, of your city, on the subject of inoculation for bovine pleuro-pneumonia.

In October last the Government of this colony engaged the services of Dr. Germont and M. Loir, two representatives of M. Pasteur, who were then in Australia, to conduct a series of the experiments, with a view to the cultivation or preservation of the virus of pleuro-pneumonia. The object of this was to keep up, if possible, a supply of pure lymph, in order that cattle-owners might be in a position to resort to inoculation before their herds had become infected. The Board (of which I am a member) appointed by the Government to assist the scientists provided a fully-equipped laboratory and as many calves as were required for the experiments. The first of these experiments, that of the cultivation of lymph through the medium of calves, having been brought to a highly satisfactory termination, a number of representative cattle-owners, medical gentlemen, and the Government Veterinary Surgeon (Mr. James Irving, M.R.C.V.S.) attended a demonstration yesterday, and I enclose a clipping from to-day's *Brisbane Courier* containing a report of the proceedings.

Permit me to summarise the result of the experiments, so far as they have gone, for the benefit of the cattle breeders of Scotland (my native country).

1. It has been clearly demonstrated that a continuous supply of pure lymph can be kept up by injecting, by means of a hypodermic syringe, a few drops of virus under the skin of a calf, behind the shoulder.

2. It has been proved, by repeated experiments, that the lymph from calves thus inoculated, even to the third and fourth cultivations, is purer, and equally as effective as lymph from an animal that had contracted the disease in the natural course.

3. It has been conclusively proved that cattle inoculated in the tail, either with virus from a beast that had contracted the disease in the natural course or with lymph cultivated as above, are proof against pleuro-pneumonia.

4. That the virus used in these experiments was the true virus of bovine pleuro-pneumonia has been demonstrated beyond cavil by the fact that the scientists failed to produce the slightest effect on goats, guinea-pigs, fowls, &c., by the injection of virus, while an equal quantity of the same virus injected into the blood of calves produced death—the calves showing the lesions of true bovine pleuro-pneumonia.—I am, &c.,

P. R. GORDON,
Chief Inspector of Stock, Queensland.
Brisbane, Queensland, 9th March, 1889.

PERVIOUS URACHUS.

By WM. HARDCASTLE, M.R.C.V.S.

Mr. A. Wheatley, F.R.C.V.S., of Reading, in *The Veterinary Record* for March 30th describes his treatment of Pervious Urachus very fully, and expresses a desire for any suggestions which would ensure greater success.

I beg to recommend a trial of the method of treatment I have adopted, which is simple and yet very effectual. The season is just on us when opportunities of treating this disease will be presented, and I confidently advise any member who may have a case to try the following.

I do not cast a foal suffering from this condition if I can possibly help it, but get one or two men to catch the animal by the neck and hold it with its hind quarters in a corner. I then apply the following powder to the part—repeating it as often as desirable.

Cupri Sulphas, one part
Zinci Oxidum, two parts.

I take the powder in my fingers and puddle it on the part; three times a day at first, and after a few days once a day will be sufficient. There is usually plently of moisture about the part, if not, I apply a little water and leave as much powder adhering to the surface as I possibly can. A cure may be expected in almost any case in from five to ten days. When I say a cure, I mean a cessation of the flow of urine.

THE DUAL APPOINTMENT.

By the Editor.

The Veterinary Examiners have for many years been elected as members of Council and until quite recently the double office seems to have been accepted as quite the correct thing. Nobody ever said anything against it—and perhaps nobody ever said anything in its favour. It was an arrangement that existed for a long time—probably it was all right; at any rate it seemed to work.

A year or two since events occurred at Edinburgh which drew unusual attention to the Examiners, and for the first time we had distinct public expressions of dissatisfaction with the Examiners and the examinations. The Council undertook to enquire into the matter, and ended by approving the conduct of the Examiners absolutely. We were told that no possible fault existed either in the Examiners or in the method of examination. Still the profession seemed hardly satisfied. The discussion was continued, and one or two Veterinary Medical Societies passed resolutions suggesting radical changes. Shortly after this the period for which the Examining Board is elected expired, and the Council had the opportunity of showing by their selection of new Examiners what value was to be placed upon their recent statements. They quietly altered the examinations in accordance with the suggestions they had just objected to, and they threw over, in a most unchivalrous and unreasonable manner, one Examiner whom they had previously defended. It was said that the enquiry undertaken by the Council could hardly be unbiassed, considering that many of its Members formed part of the Board whose action was enquired into, and that it was a difficult, if not invidious task to sit in judgment upon men with whom they had been acting for years. It was said that Examiners did not hesitate to personally canvas the Members of Council for their votes, and even voted for themselves to secure re-election. It was said that Examiners were elected who were totally unknown to a majority of the Council, and that no nominations for the office were made until the day of election—when it was too late for enquiry and when no possible basis for discussion existed.

The dual appointments, it must be acknowledged are absolutely unavoidable if there are only thirty-six men in the profession fit to act as Examiners or Councilmen. We must according to our Charter have twenty-four Members of Council and six Vice-Presidents; we must, according to the existing arrangements of the Examining Board, have sixteen Veterinary Examiners. These forty-six official positions might be occupied by as many different men, if our body could muster that number of individuals possessed of the necessary knowledge and intelligence. The fact of the Council selecting nine of their own number to fill both positions is not positive proof that they were unable to find all they wanted amongst the practitioners. It is only proof that they did not consider it necessary to look for such men outside their own Body.

Probably no one will deny that even two more entire Boards of Examiners might be found, quite equal to those now in office, without including one single man of the present Council. It is even possible that sufficient intelligent men would then be left amongst us to enable the profession to furnish another entire Council without exhausting its intellectual resources.

It is a natural and proper ambition for every member of a profession to look forward to the possibility of gaining some post of honour—of having his professional labours or his scientific acquirements acknowledged by his brethren. Not beyond the reach of many of our members is the position of Examiner so far as it can be measured by natural and acquired requisites. Not beyond the reach of any of our members is the position of Councilman so far as it can be gauged by the men who have attained to it. It seems almost a little selfish for a handful of men to monopolise all our most prized positions, but it is not in human nature to refuse the post of honor conferred by the votes of our *confrères*. If the practitioner really wishes no Member of Council to act also as an Examiner he can attain his object by only electing men pledged to the single position. If, however, either because of indifference, or because he honestly believes that some men are indispensable in both offices, he votes for those at liberty to accept any number of appointments, we may rest certain that dual offices will remain and possibly multiply.

Payments to Examiners this year average £92 a head. Money and position are potent attractions; and retaining them means a struggle which can only be sustained by those in office holding together. The mere struggle for existence renders re-duplication of offices advisable, as this entails mutual obligations, and enforces unity of sentiment and action.

QUITTOR AND FRACTURE.

By U. in U.

Jan. 22.—Patient admitted having met with an accident five days previously. There is a swelling on the outer quarter of the off fore coronet. An abscess has burst and there is a sinus. The animal is in extreme pain and very lame. The injury appears to have been caused by a tread, as a very careful examination shows no signs of pus in the hoof-cast. I remove horn (in following the sinus) and get to

within half an inch of the sole. The sinus stopped here. Dressed and bandaged.

Jan. 25.—Animal not in such pain.

Jan. 27.—Horn beginning to grow, but there is a little pus from a short sinus with a depending orifice into the old one. Inject this with Perchloride of Mercury lotion.

Jan. 31.—Doing pretty well, but a good deal of granulation.

Feb. 5.—The foot looks better generally.

Feb. 9.—There is a good deal of granulation and some discharge of not very healthy pus, but no bone swell. A small abscess has burst above the coronet and the general appearance is such as to cause a suspicion that there is exfoliation of bone, but there is no smell from the discharge. On the other hand there are the general appearances, the lameness and the small abscesses without sinuses.

Feb. 18.—Horse's foot very tender, I believe there is a piece of the pedal bone broken off or enfoliating. Take a second opinion. Disagree with consultant, but agree to give his suggestions a trial.

March 3.—I am more convinced than ever of the presence of fracture, and advise destruction of the horse. On stripping the horn off I found the toe of the pedal bone broken off and swimming in a bath of stinking pus.

Remarks.—The injury may have been caused by the horse getting his foot into the points on the railway. The foot was carefully searched; blood came but no pus. From beginning to end there was no swell of bone from the sinuses.

STRANGULATION OF INTESTINE.

By U. in U.

Called at 6.15 p.m. 5th December to a horse which had been suffering from "Colic" since 3 p.m. and had received three colic draughts in the meantime.

Found the patient sweating considerably, in great and persistent pain. The symptoms were not those of ordinary colic. He rolled very little; when down he rested his belly on the ground and stretched out his fore legs as if about to rise, which, however, he was very unwilling to do. When in this position he would from time to time raise his muzzle rather high. When not in this position he attempted to get on to his back. The abdomen was very tympanitic. On rectal examination, I found the bowels less full of solids than usual, the rectum being empty, but the large intestines appeared to be full of gas which forced them into the pelvis. The bladder was only partly full. Temperature 101·3, pulse 80, respiration not taken, but very hurried and rather stertorous with an occasional groan. The whole appearance of the animal conveyed the idea that he was suffering from a dragging pain, but I could feel nothing per rectum to cause this. With a view to relieve the breathing, which was so embarassed that I feared a ruptured diaphragm, I trochared both sides in the usual place and evacuated a vast amount of gas. The breathing at once ceased to be stertorous and the horse gave a relieved grunt. As I thought he had had quite medicine enough, I ordered very frequent enemas to be given.

From this time until 10.45 p.m. he remained standing quietly. I then found his temperature 103, pulse running down. At 5 a.m. on the 6th he fell down and died.

I found on *post-mortem* examination that the Mesentry was slightly ruptured, about eighteen inches of the Ilium had got through this rent and a piece of the Mesentery, and wound itself so tightly round the knuckle that it could not be undone and had to be cut. This knuckle was black. I was unable to find the punctures caused by the trochar.

VETERINARY PRACTICE IN MANITOBA.

A practitioner writing in February last from this part of Canada says "our conditions are very different from yours and we have difficulties to contend with which you can form little conception of. My nearest professional *confrère* is sixty miles away, and in any other direction we should have to go much farther to find one. You may imagine what a tornado of conversation occurs when by chance two of us meet. . . . . We have quite a bit of "Sussa" here, and I can tell you it floored me completely for a long time, I held autopsy after autopsy and called it *everything* before I found out what it was. We have also a good deal of Anthrax here, particularly in my own district, which includes a great stretch of low-lying and marshy ground—and we have cases of it in the winter too, even when the mercury is 40 degrees below zero—caused, I think, by germs contained in the hay cut off infected pieces of prairie. I had one last Friday in a thoroughbred Jersey bull, kept in a stable by himself, and far from any other cattle, and it was 48 degrees below zero, or 80 degrees of frost Fahrenheit when he was seized. It was so cold that after examining the brute, I put on my thick lined gloves without washing my hands, there being no water near, and the result was a nice little malignant pustule upon a half healed balling scratch on my thumb. A free use of Nitric Acid has however, I think, put a stop to the progress of the malady. One great trouble we have to contend with here is the cold. We have no way of heating the stables, too often miserable huts, save by Carbonic Acid Gas, i.e., overcrowding without ventilation; and a horse with lung disease is almost certainly doomed in winter. So with wounds, simple in themselves, they are aggravated by frost, and Erysipelas and Gangrene frequently make short work of a very slight injury. Fomentations are out of the question, and in most of our stables a poultice will freeze tight to the patient; and so for six months in the year we are driven to invent remedies suitable to the climate.

GOVERNMENT VETY. DEPARTMENT.

CONTAGIOUS DISEASES IN ANIMALS.

Reported in Great Britain and Ireland during the week ended April 20th, 1889.

Pleuro-pneumonia.—During the week 5 fresh outbreaks of this disease were reported in Great Britain; 2 of these were in England, in the counties of Essex, and East Sussex, and 3 in Scotland in the counties of Fife and Haddington.

In Ireland 2 fresh outbreaks were reported, both in the North Dublin Union. In Great Britain 19 animals were attacked and 125 healthy cattle in contact were slaughtered, while in Ireland 3 cattle were attacked and 19 healthy were slaughtered.

Anthrax.—Only 2 outbreaks of anthrax were reported during the week, 1 in Durham and 1 in Aberdeenshire; 4 animals were attacked, 1 in Durham, 1 in Northampton, and 2 in Aberdeen.

In Ireland 1 outbreak was reported at Mitchelstown, in Co. Cork.

Swine-Fever.—In England 98 fresh outbreaks were reported, and 449 pigs were attacked. No fresh outbreak occurred in either Scotland or Wales, but 1 pig was attacked in Fifeshire on previously infected premises.

In Ireland 2 outbreaks were reported, and 3 swine attacked.

Glanders and Farcy.—There were 17 fresh outbreaks of glanders reported in the week; 11 of them in London, 3 in Middlesex, 1 in Bedford, 1 in Chester, and 1 in Lanark. Of the 30 horses attacked, 23 were in London, 3 in Middlesex, 2 in Lanark and 1 each in Bedford and Chester. In London 5 fresh outbreaks of farcy were reported and 11 horses attacked.

No fresh outbreaks of farcy occurred in any other part of the United Kingdom during the week.

Rabies.—In London 2 cases of rabies were reported and 1 in Middlesex, all of them in dogs.

In Ireland there were 7 cases of rabies in the week, 5 in dogs in the counties of Down, Cork, Limerick, and Kildare, 1 in a sheep and 1 in a goat, both in County Down.

EXTRACTS.

AUSTRALIAN RABBIT PEST.

The Pasteur method remains in abeyance; and the introduction of weasles and stoats has gone on; but there are now seen to be grave objections even to the extension of the number of these *carnivora*. They are as capable of fastening upon a newly-born lamb as upon a rabbit; and they will, when in numbers, occasionally assail larger mammals. So, even the multiplication of stoats and weasles is not popular even amongst those who have no chickens or pheasants to suffer. At last a deliverer, of quite a novel kind, has made his appearance. He gives his name as Mr. Rodier, Tambua Run, Coba, New South Wales. Details of his programme have recently been published in *The Field* from information forwarded by Mr. Rodier to the English Zoological Society.

Mr. Rodier commences by saying that the reason why trapping has increased the rate at which the rabbits breed has been because the trappers take fully three bucks to one doe. In many cases the proportion is larger than this, because traps are not only set in the buckcasts to which the bucks only resort, but the trappers anoint their traps with the contents of the bladders of young doe rabbits, which attracts bucks only. Mr. Rodier says, "Save your buck rabbits at all hazards. They will be your deliverers." He argues that, if the does be killed and the bucks allowed to live: in their sexual ardour the surviving bucks will so persecute the does which survive that only a few will have young; and fewer still be allowed to rear them. The bucks in their contests with one another (which may be expected to be intensified) will kill the younger males; and what with reducing the numbers born, and causing many litters to be prematurely deserted, the surplus buck population will effectually prevent any increase; whilst barren does, and bucks without partners, will die without having made the census numbers to run up.

Mr. Rodier affirms that at Tambua Run he has put the plan into operation for twelve months with the very best possible results. Although the ground (it is about 64,000 acres) is broken, and very suitable for the increase of rabbits, they are diminishing fast, and the sheep are increasing in corresponding ratio. Mr. Rodier employs men with ferrets and nets, but no traps. As the rabbits are bolted or otherwise involved in the meshes of the nets, they are examined: and every doe is slaughtered, and every buck is at once set at liberty. So great is the alteration, that where rabbits in every stage of growth—from those just escaping from the nest, to the mature animal—used to be met with at every turn, behind every knoll, only a few are to be seen, and those generally fighting. The sexual passion has been enlisted to repress itself: and the sires constitute the chief defence against an overstocked nursery.—*Live-Stock Journal.*

NEW METHOD OF PRESERVING MILK.

A new method of preserving milk for a lengthened period, without altering its composition, and without adding any foreign ingredient, has lately been devised and brought into use in Norway.

The principle on which the success of this process depends is simply that of completely sterilising the milk, that is, deriving it entirely of organisms, which are the active agents in bringing about fermentive and putrefactive changes.

The knowledge which has been acquired of late years as to the nature and habits of bacteria renders

such a process possible. Experiments have shown that if the temperature of a liquid be raised to a considerable extent, these minute organisms are completely destroyed; but the germs or spores are not so easily got rid of, as they can endure much higher temperatures than the organisms from which they are derived, and may, therefore, give rise to new swarms when the liquid cools again. Further, these germs require a certain moderate amount of heat, in order to their development into fully formed organisms, just as an egg requires some heat to develop the chick. It is evident, therefore, that we never can be sure that any liquid is completely sterilised by merely heating it once to a high temperature; some germs may remain, and hence the labour may be lost. If, however, we first raise the temperature to such a degree that we know must destroy all the fully developed organisms which may be present, and then allow it to remain for some time at a temperature most suitable for the development of those germs which may remain, we shall have a second crop of organisms which we may destroy as before, by again raising the temperature. Even after this, however, we may still have some germs remaining, and to get entirely rid of these we must repeat the process several times, but we shall at last get rid of all trace of germs. so that no further development can possibly take place. When this stage is reached, the liquid is perfectly sterilised, and will keep sound and fresh if protected from contact with the air.

This is essentially the process which is adopted in preparing this new preserved milk. The milk is taken direct from the cow, and, in the first place, is cooled down to ordinary temperature, about 50 or 60 deg. Fahr., and then hermetically sealed up in tins. In this state it is exposed to a temperature of about 160 deg., and kept at this for one hour and three-quarters or thereabouts, after which it is allowed to cool down to 100 degs. at which it remains for some time. This alternate heating and cooling is repeated in the same manner several times, and then finally the temperature is raised to the boiling point of water, or about 212 deg., after which it is cooled again to ordinary temperature, when it is found to be completely sterilised, not a trace of any organism or germ being left, and is, therefore, in a state in which it can be kept for an indefinite length of time without undergoing any change.

The preservation is complete, and there is not the least indication of sourness or any change whatever. The milk might have been brought directly from the dairy and boiled so far as its taste is concerned, and it forms a sweet and refreshing drink. For cooking purposes it is excellent and could not be surpassed.

One evident advantage which it possesses is, that it is not only absolutely free from ordinary germs which induce fermentive processes, but it is also free from any disease-producing germs; for the same process which destroys the former also completely destroys the latter. This is a most important point; for ordinary milk carries disease germs with great facility, and many cases of fever, &c., &c., have been traced to the agency of milk carrying diseases from infected persons connected with the dairy, and it is even held by many that animals suffering from tuberculosis communicate the germs of this disease to the milk, from which it passes to the human subject. Now, whether this danger has been exaggerated or not, it is certain that it is entirely avoided in the case of this preserved milk. None of these diseases could be propagated through its means.—*Agriculturul Gazette.*

AZOTURIA?

The nature of this disease is so vague, and commonly accepted notions of its pathology so far from being acceptable, that any well-considered article on the subject cannot be too widely read. In the last number of *The Journal of Comparative Pathology*, the Editor (Professor McFadyan) writes as follows, under the title—

Hæmoglobinuria Equi.

In an article published in the first volume of this Journal, attention was directed to the extremely unsatisfactory account given in our standard veterinary text-books of that most interesting equine disease termed "Azoturia." It was there shown that the most constant and important lesions of the disease had been entirely overlooked by British authors, and that the very name applied to the disease was founded on an erroneous observation, and supported by reasoning which runs counter to the teaching of modern physiology.

As is well known, the term azoturia was employed to designate the affection in the belief that there was a constant and notable excess of urea in the urine secreted during the period of attack. But careful analysis has proved that there is no such constant excess of urea, and that the proportion of nitrogenous compounds in samples of urine passed during the paroxysm may be below the average proportion in the urine of healthy horses.

But while the urine does not exhibit any constant disturbance in the amount of its nitrogenous constituents, it does contain in all cases, at least in the early stages of the attack, a large amount of pigment. The dark colour of the urine is, indeed, one of the most striking symptoms, and any theory of the pathology of the affection which does not take account of this pigment is obviously unworthy of attention. It was to mark the constancy of this pigment, and to indicate its source, that Bollinger termed the disease Hæmoglobinuria.

But an examination of the blood during the attack or after death shows that the urinary pigment has its source in a substance dissolved in the blood plasma, and apparently identical with hæmoglobin. It thus appears that while the urinary discoloration is a constant and striking symptom, it is after all only a secondary symptom. The urinary pigment is the derivative of the hæmoglobin circulating in the blood plasma. Hence, Fröhner suggested that "hæmoglobinæmia" would be a

better term than hæmoglobinuria, inasmuch as it denotes an equally constant phenomenon, and leads the mind a step nearer the essence of the disease.

But there remains to be answered the important question, Whence comes the free hæmoglobin in the blood plasma? Two possible sources immediately suggest themselves—the red blood corpuscles and the striated muscular tissue of the body. Bollinger sought to explain all the clinical and pathological phenomena of the affection by supposing that there was an extensive destruction of the red corpuscles, in consequence of which their hæmoglobin passed into the blood plasma in a state of solution. This destruction of corpuscles he at first ascribed to some toxic substance contained in the food, but subsequently he suggested that the deleterious agent might be of the nature of a ferment developed under the influence of exposure to cold or during muscular exertion. Under this view the muscular rigidity and subsequent wasting are considered to be secondary conditions, referable to the plugging of the small arteries and capillaries with granular pigment.

Fröhner, on the other hand, considers that the muscular lesion is the primary one, that, in consequence of irritation of the temperature nerves of the skin, the metabolism in the muscles is reflexly increased, until there is an actual destruction of the sarcous substance, the pigment of which (hæmoglobin) then passes in solution into the general circulation, and is eventually excreted by the kidney.

More extended investigation will be required to determine whether the hæmal or the muscular lesion is the primary one, and our main motive in referring to the subject here is to stimulate careful clinical observation regarding the points still in dispute. We were prompted to return to the subject by the very interesting cases recorded by Mr. Hawke in this issue of the Journal. The second of the cases is remarkable in that the onset of the distinctive symptoms was not immediately preceded either by muscular exercise or by exposure of the animal to sudden change of temperature. It is conceivable, however, that the severe muscular exertion which brought on the pulmonary congestion may also have been the starting-point of the attack of hæmoglobinuria, and that the symptoms of the latter may have been retarded by the abstraction of blood. In any case the observation is a valuable one.

The theory of Fröhner is in some respects the most seductive, but it seems hardly reconcilable with the fact that instances of undoubted hæmoglobinuria have been observed in very hot weather. Inasmuch as the mere taking of the horse out of the stable almost necessarily subjects him to a change of temperature, there is an obvious difficulty in determining whether this or the muscular exertion ought to be regarded as the starting-point of the disease. We trust that any of our readers who may have the opportunity will keep the point in mind, and, if possible, in recording cases note the outside temperature and that of the stable in which the animal has been standing prior to the attack. It would be desirable to note also whether in any case the muscular rigidity precedes by a distinct interval the urinary discoloration. This might be ascertained by invariably employing the catheter as soon as the patient is seen. It would, of course, be equally desirable to observe whether the excretion of pigment in the urine ever precedes the onset of the muscular symptoms, but that obviously is less easy of proof, seeing that veterinary aid is not likely to be summoned until the more serious symptoms have set in.

In attempts to unravel the facts bearing on the etiology of the disease. the quantity and quality of the food prior to the attack ought to receive particular attention. Professor Robertson considered that all the cases that he had encountered in his extensive practice in the Border districts of Scotland were ascribable to full feeding with vetches, tares, and other leguminous substances; and quite recently a French veterinary surgeon has recorded a similar experience.* The latter describes the condition as "muscular congestion," but the association of muscular swellings (rigidity), paralysis, and dark-coloured urine leaves no doubt that the cases referred to were identical with the "toxic hæmoglobinuria" of Bollinger.

* *Recue de Med. Vet.*, June 15, 1888.

THE INFLUENCE OF HORSE SHOWS.

In the course of an interesting paper on the influence of exhibitions on horses, Mr. A. McNeilage, Secretary of the Clydesdale Horse Society, recently dealt with the question as it affected the breeding of show animals, as follows:—

When we come to the last division of our paper—the influence of the show-yard on the Clydesdale considered as a breeding animal—we tread on firmer ground, and are able to generalise from admitted facts to greater advantage. First, as concerns the stallion, it is admitted that the condition in which most horses are exhibited for show-yard honours is detrimental alike to the general health of the animal and to his usefulness and value in the stud. From time to time strong protests against the system of fattening stallions as though they were bullocks are entered by veterinary authorities and others well qualified to judge; but these protests are generally called forth only after some notable animal has fallen a victim, whereas there is sufficient reason why they should be hurled incessantly at the directors of our larger agricultural exhibitions and judges, because of the constant loss sustained through the use of highly-fed entire horses for their mares. Such horses are usually paid for at high rates and, in addition to the loss of the money more immediately expended, there is the loss of the mare's produce for that season, which may be very considerable. It is largely to obviate this feeding for show purposes, and to admit of the stallion being put on to his work in good serviceable form, with all his vital powers in full exercise, and without superfluous beef, that so many of the most valuable horses for breeding purposes are now secured by district committees in advance of the stallion show.

It is not going too far to say that no district has ever been well served by a horse which had been fed for show purposes during the preceding winter, and kept in show condition during the whole of the season, with a view to exhibition at the Highland Society's Show in July. Cases are known in which horses in such circumstances have served eighty or ninety mares, and left no more than thirty foals, whereas the same horses in subsequent seasons, when no longer required for show purposes, have served an equal number of mares, and left double that number of foals.

That the influence of the showyard system of feeding and management on Clydesdale stallions is wholly and continuously evil, does not appear to me to admit of doubt. The difficulty is to find a remedy. Exhibitions of stallions we must have. The owners maintain that there is no use showing their horses unless they are in good condition, and notwithstanding that all our leading agricultural societies instruct their judges to give first and special attention to the natural symmetery and properties of the animals, irrespective of his condition, it is undeniable that a horse in poor condition stands with most judges small chance of recognition. It is just possible that, were more attention paid by Clydesdale breeders to the rearing of animals with good level backs and barrel-shaped, deep ribs, there would be less excuse for overfeeding. How often is the remark made, when fault is found with the flat ribs or hollow back of the horse, "Oh, condition will put that all right." The condition necessary in such a case is wholly unnatural, being required not for the ordinary health of the animal, but to provide a pseudo-remedy for a natural defect. Consequently the effort to produce it must be unnatural and damaging to the general health of the animal. Of course there is this to be said on the other side, that no horse can be regarded as altogether healthy which does not appear to be the better for generous feeding and grooming. But there is a wide difference between a healthy condition of the body as shown by the sleek coat and fresh, active appearance of a horse, and the unhealthy condition resulting from an unnatural course of feeding, which shows itself by the layers of fat, several inches deep, which appear on the ribs of the animal, to the lessening of his activity and vitality. The former condition is to be commended and aimed at, the latter is to be condemned and carefully avoided.

If the opinion be general that overfeeding is bad for stallions, it may safely be averred, and is universally believed, that in the case of mares it is much worse, and so much is heard on this subject that it might be expected that statistics would bear out the opinion, and that few of our showyard mares would be found to have produced foals. Under such an impression, I set myself to compile a list of the mares of all ages which have gained a prize at the Highland Society's Shows from 1877 to 1886 inclusive in order to discover how many of them have been hopelessly barren or have aborted, and have not found my supposition supported by facts. That the proportion of failures is indeed small, the follow-figures will show;—In these ten years as nearly as I can make out, about 220 mares of all ages gained prizes: 149 of these have, so far as I can learn, given birth to one or more living and fully matured foals; twenty-three were exported before they were of age to have bred or to be declared useless for breeding, and of these six at least are known to me to have proved successful breeding mares; six died, four, at least, as was generally believed, from the results of overfeeding; four only so far have failed to breed; one died in foaling; one aborted or foaled prematurely, and afterwards became "foundered"; and of thirty-five I have been unable to learn, or it is too soon to declare anything definite.

CATTLE DISEASE IN SOUTH INDIA.

Last year, the land contributed more than a third of the total gross revenue of India; it might have been expected that every effort would have been made, both by stock-owners and by the State, to improve the cattle, and to preserve their health and strength; but very little has, as yet, been done in this direction. Cattle diseases of the most virulent types are always prevalent, and make sad havoc amongst the herds. Last year, no less than 174,223 cattle died from preventible diseases in the Madras presidency; and so little was this considered that the government of the presidency—in reviewing the report in which this serious loss of stock was brought to their notice—remarked, "The total mortality among cattle does not appear to exceed nine per cent, a figure which having regard to the rate of re-production, is quite consistent with a rapid increase of stock." We cannot share in the optimism of the Madras Government; this frightful loss of stock is a very serious matter indeed for agriculture in South India, and we consider that the matter demands the prompt and serious attention of that government. On turning to the last administration report of the Madras Government, we learn that, of the 174,223 cattle which died during last year from preventible diseases, rinderpest accounted for no less than 121,741 of the deaths; and the remainder were due to anthrax, and foot and mouth disease. Our readers, who can remember the time when the fatal rinderpest devastated the herds of this country, and recollect the panic that prevailed in all parts of the United Kingdom, and the strenuous exertions that were made by the Government and all interested in the welfare of the country, to get rid of the plague, will be rather surprised at the little importance the Madras Government appears to attach to the fact that rinderpest has apparently secured a permanent footing in the territories of Madras. From the statistics that have been published, it would appear that the deaths from rinderpest were more numerous during the past year than during the year previous; and, that the disease was not now limited to any particular tracts of country. It prevailed in all the districts, but it was most deadly in those nearest to the port of Madras. Unfortunately the disease appears still to be very prevalent in South India; for the latest season report

from Madras states, "Stock suffering very badly, chiefly from rinderpest, in Tinnevelly and Chingleput, and badly, in North Arcot, South Arcot, and Trichinopoly." These five districts have a total area quite as large as that of Ireland, and possess almost as many cattle.

Taking into account the large and increasing trade now done between India and this country, there are, we consider, very substantial grounds for apprehension in the facts just noticed. We now import bones from India, and an enormous quantity of raw hides. These hides undergo only partial curing, and cannot but be a very serious source of danger when they are, as no doubt they frequently are, those of cattle that have died of rinderpest or anthrax.

The Madras Government have a Cattle Disease Act, containing very stringent regulations regarding cattle disease; but they have no machinery for carrying out the provisions of the Act. Their so-called Cattle Disease Department consists of one veterinary surgeon and about twenty native assistants, who are each supposed to exercise an efficient watchfulness over a stock of cattle numbering over half a million head, scattered over a tract of country averaging over 4,000 square miles. We need scarcely remark that, at the best, the control that can be exercised by those men must be but nominal. The Madras Government, in the report we have noticed, stated that the loss of cattle by disease last year, in their presidency, placing a low value on the animals, would represent a sum of 26 lakhs, or over £250,000, and they grumbled at the supposed costliness of their Cattle Disease Department, which, they said, cost as much as £2,000 per annum. No comment on this is necessary, except that it is clear that the Madras Government fail altogether to recognise their responsibilities.

A suspicion is gradually springing up in this country that there is some danger attending the use on farms of raw agricultural produce from India; and, the facts we have brought under notice show clearly that there is great necessity for the exercise of every care in the use of such produce, especially where cattle are concerned. We do not desire to cause any unnecessary anxiety; but we should be wanting in our duty to the agriculturists of this country if we attempted in any way to minimise the risks to which we have drawn attention. The importation of raw hides should certainly be prohibited from countries such as Madras, in which it is admitted that such deadly diseases as rinderpest and anthrax are raging; and the same precaution should be taken in the case of raw bones. How far grain may carry contagion from one country to another is an open question; we are aware of no evidence on that point, except the cases recently referred to at a meeting of the Society of Arts, to which attention has already been drawn. But, when we remember that grain is usually threshed in India by the treading of cattle over the unthreshed corn, and that, the excrements of the animals fall on the grain, we can readily understand how diseases may be introduced. The argument that hitherto no rinderpest has been introduced into this country by means of our vast imports of Indian grain, must not be accepted as a ground for inaction; the character of the produce imported is undergoing a change; inferior grains and pulses, which were altogether unknown in this country only a year or two ago, are now coming into our markets from India, and much of such produce being offered at low prices, it will undoubtedly come into request for feeding farm stock. That anthrax may have been introduced from India there is ground for believing, and, possibly too, foot-and-mouth disease. —*The Field.*

NOTES AND NEWS.

Compulsory Slaughter of Healthy Animals.

The compulsory slaughter of healthy animals because they have been "in contact" with contagiously diseased, is a question upon which agriculturists differ, and we are aware that a good many are in favour of this merciless "slaughter of the innocents." Nevertheless, we cannot help stating our own strong general agreement with the views forcibly laid before the Essex Chamber of Agriculture, on Friday, April 26th by Mr. J. S. Gardiner. Hundreds of thousand of pounds have been spent in carrying out this system. We can roughly judge of the total cost to the whole country by the fact that in 1888 the cost to the county of Essex of the working of the Act was £7,049, and that the estimate for this year is £8,500. Of course, this is not all on account of the slaughter of healthy animals, but a considerable proportion is, and we have drawn attention to several such cases during the present year. Figures do not show that this extreme stringency—cruel both to man and beast—has any effect in stamping out disease, and even if statistics did show such a result, the argument would still remain as forcible as ever that the effect could be produced equally well, and far more economically, as urged by Mr. Gardiner, by "perfect isolation and treatment under the supervision of the Chief Inspector." To attempt to cope with a disease by wholesale slaughter of the healthy, does not seem a very sensible, civilised, or scientific proceeding, and students of the veterinary art ought to regard it as rather a reproach to themselves that such a policy is not superseded by something more worthy of public confidence.—*Essex Standard.*

Accident to a Veterinary Surgeon.

On Wednesday evening, April 24th, Mr. John S. Menzies, veterinary surgeon, was driving along in a gig from the direction of Prescot to St. Helens, and when between West Park Road and the Bird-in-the-Hand public-house, William Turner, a butcher, living in Denton's Green Lane, collided with him. Turner was driving a heavy shandry, which, besides himself, contained two other men. Mr. Menzies, seeing the furious rate at which Turner's horse was galloping, and observing that he

was on the wrong side, motioned him to go on to the other side of the street, but Turner seemed absolutely indifferent and dashed at Mr. Menzies' gig, breaking the shafts, knocking down the horse, and throwing Mr. Menzies heavily on the ground. Yesterday, Turner was charged with being drunk in charge of a horse and cart, and pleaded guilty. He had been fifty-five times previously convicted, and was fined 30s. and costs. Mr. Menzies, although badly shaken, was not seriously hurt.—*Liverpool Mercury.*

Drugging a Racehorse:

There seems now little doubt that Mr. G. M. Palmer's General Gordon, who started an equal favourite with Etheldra for the Wicken Park Steeple-chase at the Grafton Hunt Meeting on Easter Monday, had been got at. About half an hour previous to the race a suspicious looking person opened the horse's month whilst in charge of a lad, and on being interrogated by the owner as to his actions replied that he was only ascertaining the animal's age. Mr. Palmer now writes that he is firmly of opinion that the horse was drugged, and he would like to know who the man was who put his hand into "the General's" mouth. Mr. W. D. Manning, who rode the horse for a short spin on the morning of the race, pronounced him to be very fit, and considered him two stone better than when he won on him at Rugby a month previously. The horse ran last for the first mile, and had then to be pulled up.—*Sportsman.*

Poisoning of Cattle in Westmoreland:

Eight head of young cattle were on Saturday night, April 27th, found suffering from poison at Hartley Castle, near Kirkby Stephen. Two have died, and others are not expected to recover. The county veterinary surgeon, Mr. Pears, has inspected the animals and taken part of the contents of their stomachs for analysis. The oilcake on which the cattle had been fed is suspected of having contained poisonous matter and will also be analysed.—*The Farmer.*

The Surgical Congress.

The annual meeting of the German Surgical Congress, which was held in Berlin, under the presidency of Professor von Bergmann, came to a close on Saturday last. The meeting was very numerously attended by Surgeons from all parts of Germany and the world. The matters specially discussed were cancer, brain surgery, &c. Cases of the completely successful removal of the whole larynx were shown, in which the patient could speak by means of an artificial apparatus fitted to the tube in the trachea. Specimens of brain surgery were shown, and operations were described which fully confirm the views of English surgeons on this subject. Mr. Horsley, of London, communicated a paper on the method of diagnosis employed in these cases. The difficult class of cases produced by severe shocks, such as railway accidents, was also illustrated and discussed and the general opinion was that these cases are exceedingly difficult to cure. I may add that the meeting was especially fruitful in honour to Mr. Horsley, whose communications were received by his German colleagues with great interest. The other day he had the honour of being received by the Empress Augusta, and he was entertained at dinner with some of his distinguished colleagues by Herr von Gossler, Minister of Public Worship.

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PARTURIENT APOPLEXY.—ERRATA.

SIR,

In your Editorial Notes on April 20th, you refer to the importance of the meeting of the Lancashire Veterinary Medical Society in which veterinarians and medical men co-operated to discuss Parturient Apoplexy. I have not had time to read the report beyond referring to what I am credited with having said; but if the other parts are as incorrectly reported as this, it must be of little value. Kindly allow me to call attention to the glaring mistakes and I shall feel obliged.

I am reported to have said, "When there was a case of Milk Fever it was a poor cow" (page 514, second column, third and fourth lines from top). In regard to certain views advanced by Professor Pemberthy as to fat subjects I said, "Old practitioners would bear me out in stating that parturient apoplexy does occur in poor cows, and in such cases the animal is almost sure to die."

In the last line but one in the same paragraph "fed" is used instead of "bled." The sentence reads: "He knew a dairyman who *fed* every cow before he calved her" instead of "He knew a dairyman who *bled* every cow before he calved her."

Yours &c., T. HOPKIN.

ELECTION OF COUNCIL, 1889.

SIR,

Might I crave space in your next issue of *The Record* to make an observation on the letter of Mr. Banham, in your issue of last Saturday.

I am unable to attempt an answer to his statements, because of their ambiguity, and in nearly every paragraph he refutes his own argument.

Mr. B. excels in giving advice and never lacks imputation, I would appreciate the former if his words and actions were consistent, but I must repudiate the latter, for I have no connection with any "Clique" or "Ring."

I am willing to satisfy Mr. B's. morbid curiosity to a certain extent by telling him frankly, that I am neither a Councilman, a Candidate, nor an Examiner; but I fail to see why this should debar me from trying to influence the votes of practitioners by a circular stating nothing but truth. I consider the facts in the circular of more importance than my personality.

Yours etc., J.L.

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